

December 22, 2010

ZTEM Airborne Geophysical Survey Commences and Extending at Waterloo

ASX Release Stock Code: PRW

Proto Resources & Investments Ltd and Peak Mining and Exploration Limited are pleased to announce that the ZTEM airborne geophysical survey has now commenced at the Wave Hill and Lindeman's Bore projects in the Northern Territory. This ZTEM programme, which is the first known commercial use of the system in Australia, is anticipated to take approximately 1-2 weeks to complete and preliminary results are expected to be received early in the new year.

Proto is also pleased to announce that on the basis of initial results from detailed stratigraphic mapping undertaken by the Queensland University of Technology that two further exploration licences (EL28504 and EL 28505) covering an area of 2,041.3km² located south of the existing licences at Waterloo in the Northern Territory have been applied for.

Executive Summary

- ZTEM airborne geophysical programme underway at Lindeman's Bore (EL 25307) and Wave Hill (EL27413, EL27617 and EL27618). A total of ~918 line kms of ZTEM has been commissioned.
- The ZTEM programme is aimed at assisting broad scale exploration efforts within the project areas of current main interest and will potentially delineate conductive structures / bedrock targets for future drill testing.
- Proto has applied for two further exploration licences (EL28504 and EL 28505) covering an area of 2,041.3km² located south of the existing licences at Waterloo (EL27416 and EL27420) in the Northern Territory.

ZTEM Programme Commences

Proto Resources & Investments Ltd ("Proto", the "Company") is pleased to advise that a total of ~918 line kms of Z-axis Tipper Electromagnetic system ("ZTEM") has been commissioned for the Wave Hill and Lindeman's Bore projects, providing coverage over tenements EL25307, EL27413, EL27617 and EL27618.

Proto Resources & Investments Ltd ACN: 108 507 517 Suite 1901, Level 19, 109 Pitt St, Sydney 2000 NSW Australia PO Box R1870 Royal Exchange NSW 1225 **p:** +61 2 9225 4000 **f:** +61 2 9235 3889

e: info@protoresources.com.au w: www.protoresources.com.au



The Lindeman's Bore project, on granted exploration licence EL 25307, and three recently granted tenements at Wave Hill (EL27413, EL27617 and EL27618) are located 380km south-west of Katherine near the community of Kalkarindji.

All surveying has been planned to provide extensive coverage of tenements with a 1km line spacing. Figure 1 below highlights the ZTEM survey plans and their coverage for the two project areas at Lindeman's Bore and Wave Hill.

The ZTEM Geophysical Survey Method

ZTEM is the latest implementation of an airborne AFMAG system first commercialised in late 2006 and now being utilised extensively worldwide by Geotech Limited of Canada. It is an innovative airborne EM system which utilises the natural or passive fields of the Earth as the source of transmitted energy, with these fields being sourced by worldwide atmospheric thunderstorm activity. This is the first commercial use in Australia. As the ZTEM system detects EM generated by lightning strikes, it is considered that the Northern Territory is ideal due to the high level of lightning strikes that it has. This has been supported by NASA photography that shows extensive lightning activity in the Northern Territory.

At the frequencies used for ZTEM (25-600Hz), the penetration depths for the method likely range between approximately 500m to 2km for resistive geologic environments. In areas of less resistive basement or where conductive overburden is present the penetration depth or depth of investigation can be somewhat reduced.

The ZTEM data acquired during surveys reflects relative contrasts in basement conductivity/resistivity, and is not dependant on absolute conductance, as measured by standard airborne EM systems. Therefore poorly conductive targets, such as alteration / fault zones can be mapped, as well as higher conductance features, like graphitic / massive sulphide units. Overall the ZTEM can be an effective, all-round deep resistivity mapping tool, making it unique among airborne EM methods. Figures 2 and 3 highlight the configuration of a standard ZTEM system.

New Exploration Licence Applications at Waterloo

Proto is also pleased to announce that the Company has applied for two further exploration licences EL28504 (1,387km²) and EL 28505 (654.3km²) covering a total area of 2,041.3km² located south of the existing licences at Waterloo (EL27416 and EL27420) in the Northern Territory (refer Figure 4). The licence applications were made following the recently completed field work undertaken by the Queensland University of Technology ("QUT"). Proto is supporting QUT's study of volcanism in the Northern Territory.

Proto believes that these new tenements are prospective under the Ni-Cu-PGE Norilsk style mineralisation concept that Proto is pursuing. The areas covered by the tenements contain extensive outcropping of the Antrim Plateau Volcanics that are central to the geological model being applied by Proto.

The QUT field work completed detailed stratigraphic mapping of the Kalkarindji basalts in the Waterloo area. Initial results have shown significant variations in the thickness of preserved basalts from north to south. Preliminary findings would suggest that such variations require the presence of a large-scale fault, or faults, between the presently recognised Black Fellow Creek Fault and the Baines Fault. Such faults could have acted as the high-level dyke conduits which fed the surface lava flows that, under Proto's Noril'sk Style geological concept, could contain Ni-Cu-PGE deposits.



QUT also identified copper mineralisation in the Headley Limestone that can be observed lying directly upon the Antrim Plateau Basalts at Waterloo. This copper mineralisation is hosted in a completely recrystallised carbonate as small agglomerates of an as yet unidentified Cu carbonate mineral. This unit, which was only briefly investigated, appears to extend latterly for at least 40m and is a natural target for follow-up exploration work to assess continuity.

Enquiries:

Mr Andrew Mortimer Chairman and Joint Managing Director Proto Resources & Investments Ltd Office: +61 (2) 9225 4000 Mobile: +61 (0)433 894 923

The information in this report that relates to Exploration Results is based on information compiled by Andrew Jones, who is a Member of the Australasian Institute of Mining & Metallurgy. Mr Jones is a full-time employee of TasEx Geological Services Pty Ltd and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Jones consents to the inclusion in the report of the matters based on his information in the form and context in which it appears





Figure 1 – Planned ZTEM Survey Coverage (red) for the Lindeman's Bore (west) and Wave Hill (east) project areas.





Figure 2 – Standard ZTEM System Configuration





Figure 3 – ZTEM base station receiver coils





Figure 4 – Locations of Proto's granted tenements (blue) and licence applications (red) in the Northern Territory.